

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (currently amended): A method comprising:
 - a. forming an article comprising a layer of a polymer composition comprising a known concentration and a substantially uniform distribution of one or more fluorophores that fluoresce at near infrared wavelengths, wherein the fluorophores are copolymerized with the polymer composition;
 - b. exposing the layer to electromagnetic radiation to create a fluorescent signal; and
 - c. measuring the fluorescent signal to determine the thickness of the layer.
2. (original): The method according to claim 1, wherein the layer comprises a film.
3. (original): The method according to claim 1, wherein the article comprises a preform.
4. (previously presented): The method according to claim 1, 2, or 3 wherein the polymer composition is selected from the group consisting of polyesters.
5. (original): The method according to claim 1, 2 or 3, wherein the article further comprises at least one additional layer.
6. (previously presented): The method according to claim 1, wherein the article is formed by a process selected from the group consisting of extrusion, co-extrusion, injection blow molding, co-injection blow molding, extrusion blow molding, co-extrusion blow molding, stretch blow molding, solution coating, spin

blowing, lamination processes, injection molding, co-injection molding, and combinations thereof.

7. (currently amended): The method according to claim 1 wherein the polymer composition is selected from the group consisting of polyesters, polyolefins, vinyl polymers, polycarbonates, polyurethanes, polysulfones, polyethers, polyacetals, polyacrylates, polyamides, polyimides, polyester-amides, polystyrenes, and copolymers thereof, ~~and non-polymeric waxes.~~
8. (original): The method according to claim 5, wherein the additional layers independently comprise at least one material selected from the group consisting of polyesters, polyolefins, vinyl polymers, polycarbonates, polyurethanes, polysulfones, polyethers, polyacetals, polyacrylates, polyamides, polyimides, polyester-amides, polystyrenes, copolymers thereof, and non-polymeric waxes.
9. (previously presented): The method according to claim 1, wherein the fluorophores comprise at least one material selected from the group consisting of phthalocyanines, naphthalocyanines, squaraines, carbocyanines, and zethrens.
10. (currently amended): The method according to claim 1, wherein the electromagnetic radiation is in a wavelength range selected from the group consisting of near infrared, ultraviolet, and visible.
11. (original): The method according to claim 4, wherein the exposing and measuring occur on-line immediately following or simultaneously with the forming of the article.
12. (original): The method according to claim 1, wherein the article comprises a container.

13. (original): The method according to claim 3, further comprising making a container from the preform.
14. (previously presented): The method according to claim 1, wherein the layer comprises at least one polyamide.
15. (original): The method according to claim 14, wherein the layer further comprises passive and/or active barrier enhancing compounds.
16. (original): The method according to claim 15, wherein said passive barrier enhancing compounds comprise dispersed platelet particles and said active barrier enhancing compounds comprise oxygen scavenging compounds.
17. (previously presented): The method according to claim 5, wherein the thickness of the at least one additional layer is also determined.
18. (currently amended): A method comprising:
 - a. forming an article comprising a layer of a polymer composition comprising a known concentration and a substantially uniform distribution of one or more fluorophores that fluoresce at near infrared wavelengths, wherein the fluorophores are copolymerized with the polymer composition;
 - b. exposing the layer to electromagnetic radiation to create a fluorescent signal; and
 - c. measuring the fluorescent signal to determine non-uniformity of thickness of the layer.
19. (original): The method according to claim 18, wherein the layer comprises a film.
20. (original): The method according to claim 18, wherein the article comprises a preform.

21. (previously presented): The method according to claim 18, 19, or 20, wherein the polymer composition is selected from the group consisting of polyesters.
22. (original): The method according to claim 18, 19 or 20, wherein the article further comprises at least one additional layer.
23. (previously presented): The method according to claim 18, wherein the article is formed by a process selected from the group consisting of extrusion, co-extrusion, injection blow molding, co-injection blow molding, extrusion blow molding, co-extrusion blow molding, stretch blow molding, solution coating, spin blowing, lamination processes, injection molding, co-injection molding, and combinations thereof.
24. (currently amended): The method according to claim 18, wherein the polymer composition is selected from the group consisting of polyesters, polyolefins, vinyl polymers, polycarbonates, polyurethanes, polysulfones, polyethers, polyacetals, polyacrylates, polyamides, polyimides, polyester-amides, polystyrenes, and copolymers thereof, ~~and non-polymeric waxes~~.
25. (original): The method according to claim 22, wherein the additional layers independently comprise at least one material selected from the group consisting of polyesters, polyolefins, vinyl polymers, polycarbonates, polyurethanes, polysulfones, polyethers, polyacetals, polyacrylates, polyamides, polyimides, polyester-amides, polystyrenes, copolymers thereof, and non-polymeric waxes.
26. (previously presented): The method according to claim 18, wherein the fluorophores comprise at least one material selected from the group consisting of phthalocyanines, naphthalocyanines, squaraines, carbocyanines, and zethrens.

27. (previously presented): The method according to claim 18, wherein the electromagnetic radiation is in a wavelength range consisting of near infrared, ultraviolet, and visible.
28. (previously presented): The method according to claim 18, wherein the exposing and measuring occur on-line immediately following or simultaneously with the forming of the article.
29. (original): The method according to claim 18, wherein the article comprises a container.
30. (original): The method according to claim 20, further comprising making a container from the preform.
31. (previously presented): The method according to claim 22, wherein at least one additional layer comprises a known concentration and a substantially uniform distribution of at least one second fluorophore different from the fluorophore in the layer, further comprising the steps of exposing the additional layer to electromagnetic radiation to create a fluorescent signal; and measuring the fluorescent signal to determine thickness of the additional layer.
32. (currently amended): A method for making an article comprising a layer of a polymer composition comprising a known concentration and a substantially uniform distribution of one or more fluorophores that fluoresce at near infrared wavelengths, wherein the fluorophores are copolymerized with the polymer composition, the method comprising:
 - a. exposing the layer to electromagnetic radiation to create a fluorescent signal;
 - b. measuring the fluorescent signal; and
 - c. using the fluorescent signal to control the thickness of the layer.